



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,441	06/27/2003	Elie Helou JR.	40134.8001.US00	7142
34055	7590	07/13/2007		
PERKINS COIE LLP POST OFFICE BOX 1208 SEATTLE, WA 98111-1208				
			EXAMINER NGUYEN, THUKHANH T	
			ART UNIT 1722	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/608,441

Applicant(s)

HELOU ET AL.

Examiner

Thu Khanh T. Nguyen

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-40 is/are pending in the application.
- 4a) Of the above claim(s) 33-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3 and 7-10 are again rejected under 35 U.S.C. 102(b) as being anticipated by Hanamoto et al (4,545,752).

Hanamoto et al teaches an injection molding apparatus, comprising a cavity (18a) and a gap (58) in communication with the cavity for discharge air in the cavity (col. 6, lines 13-15), wherein the gap is very small and located on an upper mold (18), thus, is capable of preventing the escape of the molding material during the molding process.

In regard to claim 7, Hanamoto further discloses a male mold half (16) and a female mold half (18) forming a cavity having a desired shape (Fig. 7, 60).

In regard to claims 2-3 and 8, Hanamoto discloses an air evacuating operation (col. 5, lines 60-61) connected to the venting gap (58), so that the air inside the cavity can be discharged through very small passages without any trace of the gaps left on the surfaces of the finished product (col. 6, lines 23-29). In addition to the small venting gaps, a pattern sheet (32) forms a skin on the outside of the molding material (60) and also prevents the material from escaping the mold cavity.

In regard to claim 9, the apparatus further comprises a press (24) to hold the female mold half (18).

Art Unit: 1722

In regard to claim 10, it is inherent that Hanamoto's apparatus must include fastening means for clamping and securing the male and female mold halves together during the molding process, such as the ram (22) or the cylinders (74), otherwise the molds would not be able to create a pressure necessary for molding of the material inside the cavity.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4-6 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamoto (4,545,752) as applied to claims 1, 3 and 7-10 above, and further in view of Oono et al (6,413,069).

Art Unit: 1722

Hanamoto discloses a molding apparatus having venting gap as described above, but fails to disclose that the gap comprises a first portion and a second portion, in which the second portion is wider than the first portion.

Oono discloses a molding apparatus, comprising first and second molds (1, 2), wherein the second mold (2) comprises a plurality of small suction holes (Fig. 15, 8a) connected to a wider exhaust hole (8) for exhausting the air in a mold cavity (2a) during the molding process (col. 9, lines 52-59).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto by providing a plurality of small suction holes connected to a larger exhaust hole as taught by Oono because the small portion of the venting gaps would provide uniform venting for the cavity without causing deformities on the surface of the forming product, while the large portion of the venting holes would prevent a large pressure from building up inside the venting holes during the venting process.

In regard to claims 5-6 which are related to the sizes of the venting gaps, Hanamoto has recognized that small size of the venting gaps would prevent the trace of the gaps on the surfaces of the product (col. 6, lines 27-29). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto by providing venting gaps that are small enough so that the surface of the product would not be deformed and large enough to discharge the air forming in the mold cavity. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions

Art Unit: 1722

would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

6. Claims 11-32 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamoto et al ('752) as applied to claims 1, 3 and 7-10 above, and further in view of Atake (6,220,849).

Hanamoto fails to disclose that the female mold includes a first portion and a second portions.

Atake discloses a molding apparatus, comprises a split female mold half (12) including a first portion (14a) and a second portion (14b) and a suction groove or gap (16) connected to a plurality of suction holes (17) formed between the mold portions (Fig. 12), wherein the first portion (14a) and the second portion (14b) are held together by a platen (11).

In regard to claims 11 and 22, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto by providing a split mold, could either be a male mold or a female mold, having different portions as taught by Atake, because when the split mold with different portions would form a cavity that have uneven sides or forms for forming of a product having a complex shape.

In regard to claims 12, 16-17, 21, 23-24, 27-29 and 32, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto by providing the venting gap as taught by Atake which includes a plurality of smaller suction holes (Fig. 12, 17) connected with a larger conduits (19) connected to the external vacuum pump (col. 8, lines 59-61) because the small air venting gaps (or suction holes) would prevent deformation

Art Unit: 1722

on the surface of the molding products, while the larger portion would prevent the pressure from building up in the venting gaps and reducing the air venting inside the mold cavity.

In regard to the location and the orientations of the gaps, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto and Atake by placing the venting gaps at any desired locations and orientations depending on the size and the shape of the mold cavity and the orientation of the molding apparatus. It has been held that by merely shifting the position of the parts without changing the operation of the mechanism will not render the claims patentable and the placement of the mechanism is an obvious matter of design choice. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950); *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

In regard to claims 13-14, 19-20, 25-26, and 30-31 that are related to the sizes of the venting gaps, Hanamoto has recognized that small size of the venting gaps would prevent the trace of the gaps on the surfaces of the product (col. 6, lines 27-29). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Hanamoto by providing venting gaps that are small enough so that the surface of the product would not be deformed and large enough to discharge the air forming in the mold cavity. *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Response to Arguments

7. Applicant's arguments filed 04/16/2007 have been fully considered but they are not persuasive.

8. The Applicant alleged that the prior art fails to disclose that the mold apparatus having a gap in combination with a mixture comprising a skin to prevent material from escaping from the mold cavity. First of all, Hanamoto et al specifically discloses an air passage 58 to evacuate air from the mold cavity 18 (see Remarks, page 8). Secondly, because of the location of the air passages – on the top of the upper mold plate, and because of the presence of the pattern sheet 32, molding material 60 cannot travel through the gap during a normal molding process, because it will have to travel up against the gravity. Also, if the material travels into the air passages it would result in indentation or undesired recesses on the surface of the products – a problem Hanamoto has recognized and wanted to avoid (col. 6, lines 6-29). For all of these reasons, Hanamoto is believed to be capable of preventing material from traveling through the air passages during the molding process, while being capable of exhausting air from the mold cavity.

9. In regard to the skin of the forming product, this limitation has little or no patentable weight in determining the patentability of an apparatus claim, where the prior art has shown all the apparatus structures. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re*

Art Unit: 1722

*Young, 75 F.2d *996<, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).*

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

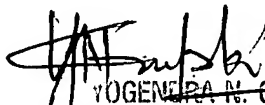
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN



YOGEN N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700